

## Jet Modification Via The LPM Effect In Infinite Quark Matter

Recent results for Pb+Pb collisions at  $\sqrt{s_{NN}} = 2.76$ -TeV from the LHC have shown dramatic di-jet asymmetry, implying a strong medium modification of jets as they pass through the QGP.

A fully-relativistic Monte-Carlo Boltzmann transport code, the Parton Cascade Model (PCM), is used to simulate the development of a jet in a partonic medium. The PCM includes collisional and radiative processes and a local probabilistic implementation of the Landau-Pomeranchuk-Migdal (LPM) effect.

The PCM is particularly suitable for the examination of jet modification as it treats both medium and jet partons on an equal footing, allowing for full tracking of the process.

We present the first infinite matter results, including an accurate treatment of the LPM effect, for the energy flow within the jet cone alongside results for the rate at which energy lost from the jet is deposited back into the medium. We also apply our simulation to the observed ATLAS dijet asymmetry.

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